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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,753	12/19/2001	Jayarama K. Shetty	GC695	2084

7590 12/21/2005

Genencor International, Inc.
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EXAMINER	
PRATS, FRANCISCO CHANDLER	
ART UNIT	**PAPER NUMBER**
1651	

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 10/026,753	**Applicant(s)** SHETTY ET AL.	
	Examiner Francisco C. Prats	**Art Unit** 1651	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 26 September 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☒ The Notice of Appeal was filed on *22 November 2005*. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☒ They raise the issue of new matter (see NOTE below);
   (c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1,2,6-18,21-34,37-51 and 53-61*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attachment.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

ATTACHMENT TO ADVISORY ACTION

The after-final amendment filed September 26, 2005, has been received. The text of those sections of Title 35, U.S. Code, not included in this action can be found in a prior office action.

The after-final amendment filed September 26, 2005, will not be entered because it raises new issues for search and consideration. Specifically, as noted on the cover sheet, the claims now explicitly exclude the presence of bisulfite in the hydrolysis medium. This limitation has not been searched or considered previously. Thus, the amendment clearly raises a new issue for search and consideration. Because the new claim language requires additional search and/or consideration, non-entry of the proposed amendment is clearly proper under 37 CFR § 1.116.

All of applicant's argument has been fully considered but is not persuasive of error. With respect to the rejection under § 102/103, applicant's argument entirely assumes entry of the non-entered limitation. Thus the argument is technically directed to a limitation not present in the claim.

With respect to the issue of obviousness, it is respectfully submitted that the argument does not address the rejection as proposed. In short, Shetty discloses the

desirability in starch liquefaction processes of using an enzyme having the exact properties of the enzyme described by JP '979. Contrary to applicant's argument, Shetty does in fact state how the process should be conducted by saying that an enzyme capable of liquefaction at acidic pH should employed in a liquefaction conducted at acidic pH. Respectfully, the clarity of Shetty's disclosure, combined with that of JP '979, goes well beyond "obvious to try."

Regarding Shetty's two-stage liquefaction being different than that claimed by applicant, note specifically that applicant's claims recite the process in "open" comprising language, which encompasses any additional steps, including those present in the Shetty process. Moreover, the liquefaction shown on page 5 is not the only liquefaction process disclosed by Shetty. The liquefaction processes graphically depicted on page 14 of Shetty all have a single addition of enzyme, thus meeting this limitation in applicant's claims.

As to whether a DE of 10-12 can be reached at the claimed pH in the claimed amount of time, as applicant is surely aware, it is textbook knowledge that the speed of an enzyme reaction can be increased (up to Vmax) by increasing the ratio of enzyme to substrate. Thus, the rejection of record being an obviousness rejection rather than an anticipation rejection, the

artisan of ordinary skill, recognizing the fact that the rate of an enzyme reaction could be increased by increasing the ratio of enzyme to substrate, clearly would have been motivated to have used that technique to increase, or at least optimize, the rate of the reaction described by Shetty. At the very least, in view of the fact that the majority of the claims do not recite any limitation with respect to enzyme amount, applicant is incorrect in arguing that the claims recite any result unexpected from the cited prior art with respect to reaction rate. Moreover, with respect to those claims reciting enzyme amounts, a number of those claims (e.g. claim 9) recite only minimum amounts, therefore encompassing very large amounts of enzyme which would in fact be expected to generate fast enzyme reaction rates. Further still, with respect to those claims reciting maximum enzyme amounts (e.g. claim 13), there is nothing on the record indicating that the claimed enzyme behaves in any manner unexpected from the disclosures of the cited prior art.

Lastly, with respect to the disclosure in JP '979 supposedly teaching away from using that enzyme in Shetty's process, it is respectfully pointed out that applicant analyzes JP '979 in the absence of Shetty, whereas the references are being applied in combination. Obviously, if one were to use the enzyme disclosed by JP '979 in Shetty's process, one would not

have to adjust the pH to an acidic one, since the pH was already at that level. Moreover, as discussed above, the single enzyme addition is disclosed at least by Shetty. Further still, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

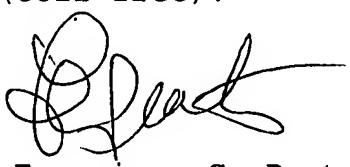
In the instant case, as discussed in previous office actions, JP '979 discloses an α-amylase which meets exactly the criteria disclosed by Shetty as being desirable and advantageous for use in the disclosed process of preparing glucose from starch. Specifically, the enzyme is thermostable, acid-stable, optimally active at a pH of about 4, and does not require calcium for activity (see Table 2). Thus, the artisan of ordinary skill practicing Shetty's process clearly would have recognized that the enzyme disclosed by JP '979 possesses all the properties required for use in Shetty's process. The artisan of ordinary skill would therefore clearly have been motivated to have used the enzyme of JP '979 in Shetty's process. The holding of obviousness is therefore properly maintained.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francisco C. Prats whose telephone number is 571-272-0921. The examiner can normally be reached on Monday through Friday, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Francisco C. Prats
Primary Examiner
Art Unit 1651

FCP

Continuation of 3. NOTE: The new limitation excluding bisulfite from the method has not been searched or considered previously.